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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,848	12/08/2003	Kwang Hyun Kim	40296-0043	9273

26633 7590 09/20/2005

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EXAMINER

ENGLUND, TERRY LEE

ART UNIT	PAPER NUMBER
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2816

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary**Application No.**

10/728,848

Applicant(s)

KIM ET AL.

Examiner

Terry L. Englund

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 28 & Jul 25, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-12 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07252005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment/Drawings/IDS

The amendment and drawings submitted on Jun 28, 2005, and the IDS submitted on Jul 25, 2005, were reviewed and considered with the following results:

The drawing changes, and some associated changes to the disclosure and comments with respect to Fig. 1, overcame the objections to the drawings as described in the previous Office Action. Therefore, those objections have been withdrawn.

The amended claims overcame the previous Office Action's objections to claims 1-4, 6, and 8-9, as well as the rejections of claims 1-12 under 35 U.S.C. 112. Therefore, all of those claim objections and rejections have been withdrawn. However, a previously overlooked concern in claim 3 was found when all the claims were reconsidered. That concern is described later under the section of Claim Objections.

Although the previous prior art rejections had been made, and the above amended claims should have made all the claims allowable with respect to the previous Office Action, after carefully reviewing and reconsidering the language of the claims and what is shown/disclosed within the prior art references, it was determined the reference of Kim (cited in the previous Office Action) actually shows and discloses circuitry/functions related to Figs. 2 and 14-16 that read on claims 1-2. Since these relationships between that reference and the claimed limitations had been inadvertently overlooked before, some prior art rejections are described later, and this action is **NON-FINAL**.

The IDS reference, and its corresponding Korean Notice of Rejection, were also reviewed and considered. Although that reference does show circuitry that will provide a varying control

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signal depending on a signal stored in an internal setup device (e.g. circuitry related to at least one fuse and its corresponding capacitor), the reference does not clearly show or disclose: 1) the characteristic controller and internal voltage generating unit as recited within the present application's independent claim 1; or 2) the combination of first/second test mode blocks, internal voltage generating unit, and data output unit as recited within the present application's independent claim 5. There is presently no strong motivation to modify or combine this reference with a known teaching, and/or another reference.

Claim Objections

Claim 3 is objected to because of the following informality: As presently written in claim 3, the relationship between the received signal, demultiplexer, and test mode signal can be confusing. It appears that the signal is only received by the demultiplexer after the signal is "outputted from an address pad in response to the test mode signal" (i.e. see lines 2-3). However, it is believed the demultiplexer receives the signal directly from the address pad, regardless of the test mode signal. For example, see address pads 60a/60b, demultiplexers 110/210, and test mode signal Tm_enable in the applicant's own Fig. 2, and also the detailed circuit of demultiplexer 110 as shown in the applicant's own Fig. 7. Therefore, one of the following changes is suggested for claim 3: 1) change "pad in" to --pad, and-- on line 3, and change "signal and" on the same line to --signal,--; or 2) replace "pad in response to the test mode signal" on line 3 with --pad,--, and add --in response to the test mode signal-- after "decoder" on line 4. Either of these changes will help to describe where/when the signal is output from the demultiplexer, not how/when it is output from the address pad and received by the demultiplexer. Appropriate corrections are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al. (Kim), reference A cited on the previous Office Action's PTO-892. Fig. 2 of Kim shows an internal voltage generator comprising fuse programmable control signal generator 300 receiving external signal TP0-TPn, and outputting characteristic controlling signal S; and internal voltage generating unit 400 receiving reference input signal Vr1 and characteristic controlling signal S, thus controlling a characteristic of internal voltage Vr2. An example of generator 300 is shown in Fig. 14, which comprises tuning unit 330,340 receiving test mode signal Ptest, and external signal TP0-TP, wherein it is understood fuse circuit block 340 provides a signal stored in an internal setup device (e.g. see related Figs. 15-16, and fuse F20/capacitor Q50 shown in Fig. 16). Tuning unit 330,340 outputs control signal CUT,CUTB, which is received by characteristic controller 320 that outputs characteristic controlling signal S. When Ptest is activated, the level of control signal CUT,CUTB is determined by external signal TP0-TPn (e.g. see column 12, lines 19-30), and when Ptest is inactivated, the level of control signal CUT,CUTB is determined by the signal stored in the internal setup device (e.g. see column 12, lines 31-34). Therefore, claims 1 and 2 are anticipated.

Allowable Subject Matter

Claims 5-12 are allowed. There is presently no strong motivation to modify or combine any prior art reference(s) to ensure an internal voltage generator comprises the combination of first/second test mode blocks, internal voltage generating unit, and data output unit as recited within the present application's independent claim 5, upon which claims 6-12 depend.

Claims 3-4 are only objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. There is presently no motivation to modify or combine any prior art reference(s) to ensure the internal voltage generator also comprises the: 1) demultiplexer as recited within claim 3; or 2) the multiplexer as recited within claim 4.

Any inquiry concerning this communication, or previous communications from the examiner should be directed to Terry L. Englund whose telephone number is (571) 272-1743. The examiner can normally be reached Monday-Friday from 7 AM to 3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (571) 272-1740.

The new central official fax number is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1562.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TLE
Terry L. Englund

17 September 2005


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Approved
9.17.05
TLE

Attorney Docket No.: 40296-0043

In re patent application of: Kwang Hyun KIM

Confirmation No.: 9273

Serial No.: 10/728,848

Art Unit: 2816

Filed: 8 December 2003

Examiner: Englund, T.

For: INTERNAL VOLTAGE GENERATOR OF SEMICONDUCTOR DEVICE COMPRISING
CHARACTERISTIC CONTROLLER

U.S. Patent and Trademark Office
Customer Window, Mail Stop Amendment
Randolph Building
401 Dulany Street
Alexandria, Virginia 22314

TRANSMITTAL OF FORMAL DRAWINGS

Sir:

Transmitted herewith are replacement sheets for Figures 1 and 8 (2 sheets), for the captioned application. Figure 1 has been amended to include a bracket to embrace the separate parts, in accordance with 37 C.F.R. § 1.84(h)(1), and Figure 8 has been amended to replace reference number "40" with reference number --50--, in accordance with the Examiner's helpful suggestion. The Official Draftsperson is respectfully requested to approve this drawings for entry into the application.

Respectfully submitted,

June 28, 2005

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S/N 10/728848
REPLACEMENT SHEET

Approved
9.17.05
TLE

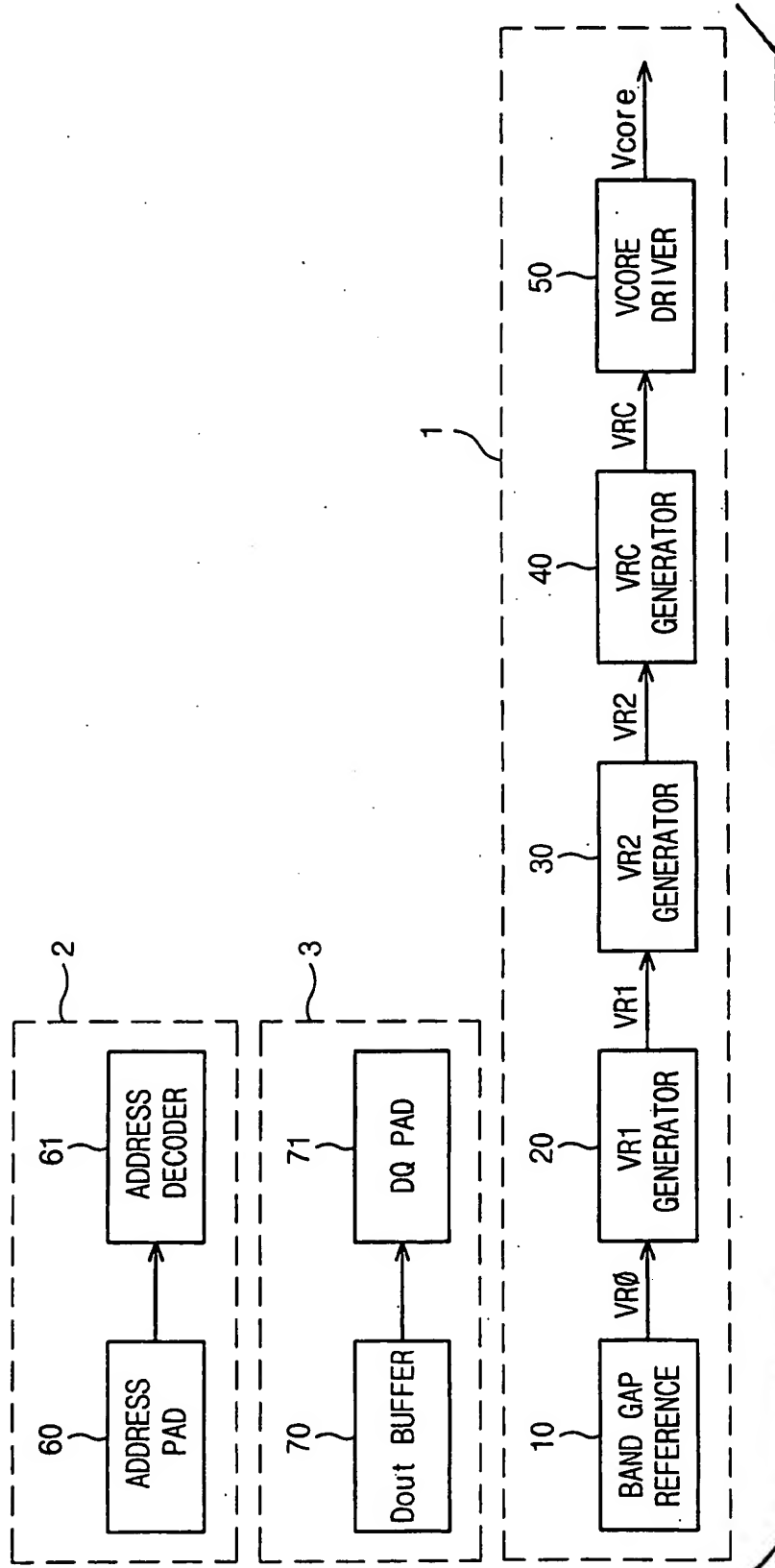


Fig. 1
(Prior Art)



S/N 10/728848
REPLACEMENT SHEET

Approved
8.17.05
HLE

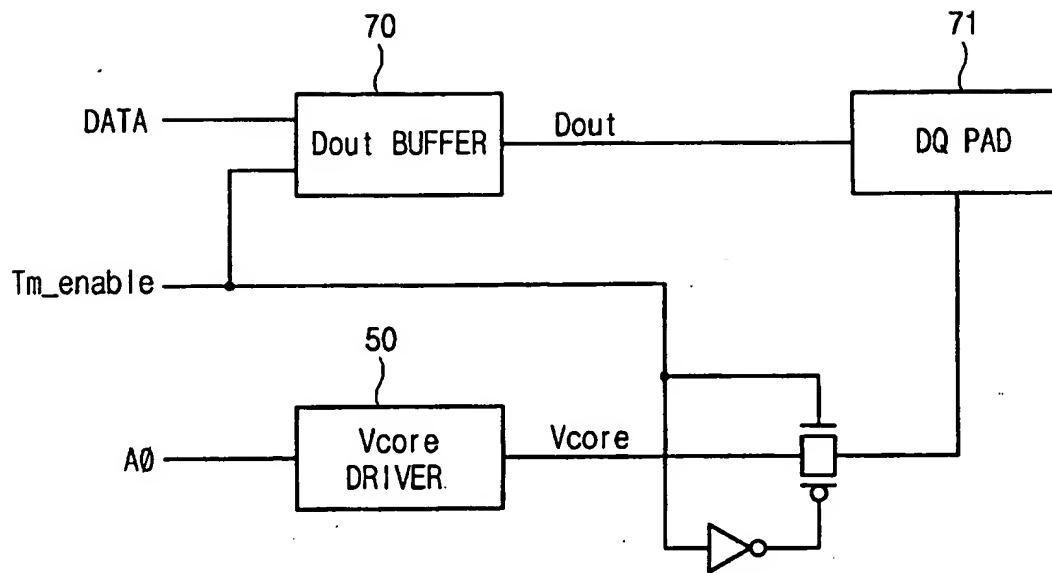


Fig.8